



Curriculum Map Year 7

| OSA Maths Faculty Year 7 Curriculum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Half term | 8 | 9 | 10 | 11 | 12 | 13 | 14 | Christmas | 15 | 16 | 17 | 18 | 19 | 20 | Half term | 21 | 22 | 23 | 24 | 25 | Easter | 26 | 27 | 28 | 29 | 30 | 31 | Half term | 32 | 33 | 34 | 35 | 36 | 37 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Autumn Term | | | | | | | | Autumn Term | | | | | | | | Spring Term | | | | | | | | Spring Term | | | | | | | | Summer Term | | | | | | | | Summer Term | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 7 | NP1 Place Value | | | | | | | | NP2 Addition and Subtraction | | | | | | | | NP3 Multiplication and division | | | | | | | | NP4 Powers and roots | | | | | | | | NP5 Order of Operations | | | | | | | | NP6 Directed number | | | | | | | | A1 Intro to Algebra | | | | | | | | NP7 Fractions | | | | | | | | GM1 | | | | | | |

NUMBER AND PROBABILITY 4 – Powers and Roots

Repeated multiplication; Powers and roots; Prime numbers; Composing and decomposing primes.

NUMBER AND PROBABILITY 5 – Order of Operations

Flexible calculating; The order of operations; Using visible and invisible brackets to break the order of operations.

NUMBER AND PROBABILITY 6 – Directed Number

Direction of numbers; Using negative numbers; Calculating with negative numbers.

ALGEBRA 1 – Introduction to Algebra

Variable unknowns; Algebraic expressions; Substitution Equations.

NUMBER AND PROBABILITY 7 – Fractions

Representing fractions with pictures and numerals; Calculating with fractions; Finding fractions and wholes.

GEOMETRY AND MEASURES 1 – Drawing, Measuring and Constructing

Labelling lines and angles; Drawing and measuring lines and angles; Using compasses and a protractor; Constructions and loci.

Curriculum Map Year 8

| OSA Maths Faculty Year 8 Curriculum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | | | | | | | | | |
| | Autumn Term | | | | | | | Half term | Autumn Term | | | | | | | Christmas | Spring Term | | | | | | | Half term | Spring Term | | | | | | | Easter | Summer Term | | | | | | | Half term | Summer Term | | | | | | |
| Year 8 | NP7 | | NP8 | | | NP9 | | A2 | | A3 | | A4 | | NP10 | | | GM2 | | SP1 | | GM3 | | NP11 | | A5 | | | | | | | | | | | | | | | | | | | | | | |

ALGEBRA 4 – Linear Equations

Mathematical equality; Balancing an equation; Solving all types of linear equations.

NUMBER AND PROBABILITY 10 – Proportional Reasoning

Direct and inverse proportion; Proportional reasoning in various contexts; Percentage changes and decimal multipliers.

GEOMETRY AND MEASURES 2 – Polygons and Angles

Angle facts about lines and polygons; Types of quadrilaterals and other polygons; Bearings.

SP1 - Discrete Data

Collecting data; Processing data; Stem and Leaf diagrams; Drawing and using pie charts; Mode, median and range; Mean; Summary statistics from frequency tables and graphs.

GEOMETRY AND MEASURES 3 - Area

Area of a parallelogram; Area of a trapezium; Mixed area and perimeter; Area of circles.

NUMBER AND PROBABILITY 11 – Ratio

Using ratio notation; Equivalent ratios and simplifying; Ratios and fractions; Finding values from parts or the whole.

ALGEBRA 5– Formulae

Substituting numbers into expressions and formulae; Writing and using formulae; Rearranging formulae to change the subject.



Curriculum Map Year 9

| OSA Maths Faculty Year 9 Curriculum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Week Year 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Half term | 8 | 9 | 10 | 11 | 12 | 13 | 14 | Christmas | 15 | 16 | 17 | 18 | 19 | 20 | Half term | 21 | 22 | 23 | 24 | 25 | Easter | 26 | 27 | 28 | 29 | 30 | 31 | Half term | 32 | 33 | 34 | 35 | 36 | 37 | 38 |
| | Autumn Term | | | | | | | | Autumn Term | | | | | | | | Spring Term | | | | | | Spring Term | | | | | | Summer Term | | | | | | Summer Term | | | | | | | | |
| 9a1, 9a2, 9b1, 9b2 | A3-A8 essentials (new) | | | | | | | NP9 | NP10-NP11 essentials (new) | | | | | | | GM1-3 essentials (new) | | SP1 | SP2 | | NP12 | A9-10 essentials (new) | | | | | | SP3 essentials (new) | GM4 | | | | | GM5 | | | | | | | | | |

STATISTICS AND PROBABILITY 1 - Discrete Data

Collecting data; Processing data; Stem and Leaf diagrams; Drawing and using pie charts; Mode, median and range; Mean; Summary statistics from frequency tables and graphs.

STATISTICS AND PROBABILITY 2 - Bivariate Data

Reading a scatter graph; Drawing a scatter graph; Correlation; Outliers; Lines of best fit; Time series graphs.

NUMBER AND PROBABILITY 12 – Standard Form

Small and large numbers in standard form; Converting from 'almost standard' form to standard form; Comparing numbers in standard form (and "almost standard" form); Adding and subtracting in standard form, by converting to normal form and by using distributivity; Multiplying and dividing in standard form using commutativity; Problems and applications, including order of operations; SI prefixes and engineering form.

ALGEBRA 9 – Contextual Graphs

General "real-life" graphs, interpreting y-intercepts as a fixed value/charge, etc, and gradient as a rate of change in context; Drawing, reading from and extrapolating from conversion graphs; Introduction to speed, distance, time; Distance-time graphs, including finding the average speed, speed of a section as the gradient of the line; Velocity-time graphs, including finding the acceleration as the gradient and displacement as the area under the graph.

ALGEBRA 10 - Advanced Linear Graphs and Equations

Find the gradient of a line using change in y/change in x; Use the form $y=mx+c$ to draw lines and factorising to find the root and sketching linear graphs; Identify equations of parallel and perpendicular lines; Advanced $y=mx+c$ questions, finding equations given two points or a point and gradient; Solve equations in two variables graphically: know that the points on a line represent the solution set to an equation in two variables, and that the intersection of two lines represents the solution to a pair of simultaneous equations in two variables; Find the solution to a pair of simultaneous equations by elimination and by substitution, and check the solution; Write and solve simultaneous equations from contexts; Find regional solutions to linear inequalities in two variables on a Cartesian grid, including regions formed from multiple inequalities and identifying integer solutions in a region.

STATISTICS AND PROBABILITY 3 - Introduction to Probability

systematic listing (product rule for counting); Record, describe and analyse the frequency of outcomes of simple probability experiments, introduce language of probability; Theoretical probability - formalising language and notation, calculating; Sum of probabilities of all mutually exclusive events = 1; Generate theoretical sample spaces, including systematic listing of combinations and outcomes, and use these to calculate probabilities; Recording outcomes and possibilities using frequency trees, two-way tables and simple Venn diagrams.



GEOMETRY AND MEASURES 4 - Congruence and Similarity

Congruence – introduction; Tessellating congruent shapes to fill the plane; Isometries: translation (as a vector), reflection and rotation, including rotational and reflective symmetry, combinations of transformations, including successive translations. Knowing that reflection, rotation and translation produce congruent shapes; Similarity of length, proving shapes are similar, finding scale factors and writing equivalent sides as equivalent ratios; Enlargement (including negative and fractional enlargements). Knowing that enlargements produce similar shapes; Conditions for congruent triangles - simple examples, getting familiar with terms.

GEOMETRY AND MEASURES 5 – Right-Angled Triangles

Pythagoras' Theorem in 2D to find missing sides; Proving a triangle is right-angled with Pythagoras; Identifying Pythagorean triples; Pythagoras to find the distance between two points; Trigonometric ratios for finding missing sides in right-angled triangles; Trigonometric ratios for finding missing angles in right-angled triangles; Exact values of $\sin q$, $\cos q$ and $\tan q$ for $q = 0, 30, 45, 60, 90$ by heart; Problems involving Pythagoras and trigonometry (including bearings), method selection practice.